DRUGS AND MENTAL HEALTH

by

Helen B. Shaffer

Nov. 20
1957

DRUGS AND MENTAL HEALTH

RAPIDLY SPREADING USE of tranquilizing drugs has aroused considerable concern among medical leaders. They feel that more time and study are needed to weigh the effects of the drugs on human beings. They tend to look on the current predilection for "happiness pills" as a medical fad, for they strongly suspect that the drugs are being prescribed for not a few individuals who receive no benefit from them and who may even be harmed.

Early enthusiasm for one or another of the drugs as a "miracle" specific for severe mental illness is being tempered by the more cautious reports of later investigators. Although the tranquilizers continue to be regarded as useful in the care and treatment of mental patients, hope is fading that they will bring about a drastic reduction in the number of persons afflicted. The attention paid to the drugs, however, has had the important indirect result of stimulating research into the basic causes of mental disease. Studies of the action of tranquilizing drugs on the brain have opened new avenues for exploring the connections between mind and body, which may help to establish a physiological basis for mental illness.

Meanwhile, two agencies of the federal government are making concerted efforts to assemble full and dependable information on the efficacy of particular drugs in particular medical situations, on hazards involved in their use, on appropriate dosages, and other data necessary for safe and effective use of the drugs in medical practice. The National Institute of Mental Health of the U.S. Public Health Service and the Veterans Administration, which cares for 60,000 hospitalized neuropsychiatric patients, are taking the lead in pressing these investigations.

Rapid Rise in Employment of Tranquilizing Drugs

What bothers medical leaders the most is the speed with which a large part of the population appears to have been

put on a diet of tranquilizers. Only a year after the new drugs had become commercially available in 1954, a survey showed that three of every ten prescriptions called for some form of tranquilizer.[1] After another year, retail sales of the drugs had an estimated annual value of $125 million.

The number of tranquilizer prescriptions being filled this year is believed to be far in excess of last year's total of 50 million, as estimated by the drug industry. *Fortune* last May hazarded the opinion that at least 20 million individual Americans had experienced the effects of a tranquilizer. Drug manufacturers reported early this month that an 8 to 10 per cent annual rise in their total sales was due largely to introduction of new drugs, including tranquilizing drugs. Among the country's most-used drugs, the tranquilizers lag behind only such "best-sellers" as the pain-killers, the sedatives, and the antibiotics.

Mental hospitals are naturally heavy users of tranquilizers. A recent survey of Veterans Administration hospitals showed that approximately one-half of their neuropsychiatric patients were on tranquilizers. The number of V.A. patients receiving the drugs rose from 17,000 in mid-1955 to 40,000 at the end of 1956. Between 1954 and 1956, use of tranquilizers largely accounted for a 122 per cent increase in allocations for drugs in V.A. neuropsychiatric wards.

No true tranquilizing drug may be sold in drug stores except on a physician's prescription.[2] Hence the high sales volume of tranquilizers reflects the current tendency of physicians to prescribe the drugs for a wide variety of conditions. Sales volume is unquestionably affected also by pleadings of patients, not suffering from mental illness, who want the doctor to give them something to help them through some physical, emotional, or other difficulty.

The popularity of the new drugs is easily explained. Rarely in modern times has a substance been available for general medical use which promised so much relief with so little penalty. Man has searched from the beginning of time for such a sovereign remedy for his troubles. Other

[1] Affiliated Public Relations, press release, June 7, 1956.

[2] The Food and Drug Administration and the Federal Trade Commission keep watch for patent medicines falsely advertised as tranquilizers; most of them contain aspirin, anti-histamines, and other common drugs sold in new combinations at inflated prices.

drugs brought relief from misery but invariably exacted a price; they made one drowsy or drunk, impaired bodily functions, caused addiction, or produced other undesirable consequences. Early reports on the tranquilizers noted the relative insignificance of side-effects and stressed the marked success in relieving anxiety and tension. Clinical observers remarked on how "happy" the medication made many patients.

Decline in Number of Mental Hospital Patients

The new drugs appealed with particular force to the medical staffs of mental hospitals, which have to care for the most difficult of all patients but in most cases are overcrowded, low-budgeted, and undermanned. Report after report from hospitals which tested the new drugs said they produced a remarkable remission of symptoms, especially among patients who had been the most severely disturbed and the most unresponsive to other forms of treatment. The drugs strongly commended themselves in the case of schizophrenics, who make up the bulk of the long-term inmates of mental institutions and whose illness is the most baffling of mental diseases.

As schizophrenics, under the influence of tranquilizers, began to act more like normal persons, hope rose that use of the new drugs would lead to release of large numbers of patients who might otherwise spend many years, or the remainder of their lives, in hospitals. Some of the earliest studies disclosed that about one-fifth of the severely disturbed patients showed enough improvement to be released. A drop of 7,000 in the total number of mental patients in public hospitals from the middle of 1955 to the middle of 1956, and a sharp rise in the hospital dismissal rate in the past year or two, were widely attributed to use of tranquilizers.

Public health investigators, however, hesitate to give tranquilizers that much credit; too many other factors bear on admission and discharge rates of mental hospitals. A trend toward shorter terms of hospitalization had been established before tranquilizers came into wide use. A recent Public Health Service study stated:

> Although the tranquilizing drugs do possess some of the necessary properties of an agent that could prevent admissions to mental hospitals by making it possible to treat more patients on an outpatient basis, much more information is needed about the processes

operating in society that lead to hospitalization before one can conclude that any significant proportion of a reduction in admissions to mental hospitals can be attributed to the tranquilizing drugs.[3]

Dr. Winfred Overholser, superintendent of St. Elizabeth's Hospital, a federal mental institution in Washington, D. C., told a congressional committee last year that he thought "New tranquilizing drugs have certainly been instrumental in making possible some discharges from the hospital, . . . [and] use of these drugs by private practitioners has undoubtedly prevented some admissions."

Gains in Hospitals From Quieting Violent Patients

Whatever the effect of tranquilizers on the size of hospital populations, they perform a welcome service by rendering disturbed patients more tractable and making life in the wards more peaceful. A psychiatrist recently told an assembly of state officials that they could anticipate a "significant reduction in the symptomatology of two-thirds of the overactive patients" of public hospitals, which would make the patients "quiet, placid and amenable to other therapeutic procedures." The primary usefulness of the tranquilizing drugs, he said, was in modifying symptoms of "over-activity, hostility, combativeness, agitation and increased tension."[4]

This means quieter hospital wards, fewer accidents, less destructiveness, simpler treatment procedures, and more limited use of physical restraints. Improvement of staff morale also is likely. The Veterans Administration found it could grant many more privileges to patients after they were put on tranquilizers. The number allowed to make trial visits away from the hospital increased 70 per cent between 1953 and 1957.

A Michigan hospital which tested a tranquilizing compound on 225 of its most difficult female patients over a period of eight months found improvement in the great majority of cases in such personal habits as courtesy, neatness of dress, personal hygiene, table manners, and general cooperation in ward procedures. "The patients' new interest in personal appearance swamped the staff beautician with requests for permanents. . . . Quite noticeable has been

[3] Morton Kramer, *Public Health and Social Problems in the Use of Tranquilizing Drugs* (Public Health Monograph No. 411, 1956), p. 9.

[4] Jacques S. Gottlieb, superintendent of Lafayette Clinic, Detroit, in address before 13th General Assembly of the States, Dec. 7, 1956.

the decrease in the number of arguments, temper outbursts and fights. . . . Destruction is down over 65 per cent in all phases: furniture, windows, fixtures, mattresses and clothes." [5]

If the tranquilizers continue to prove useful in this way, a number of administrative changes in hospital management can be expected. The daily routine and even the physical layout of mental hospitals will be influenced by the more orderly behavior of patients. Hospital budgets will have to allow for larger drug expenditures, but allocations for the more expensive kinds of therapy can be reduced.[6] On the other hand, fewer custodial and more professional staff members may be needed for patients who recover sufficiently to permit a higher level of care.

Possible Misuse of the Drugs in Non-Mental Cases

Mental hospitals obviously have a legitimate interest in tranquilizers. But the volume of tranquilizer sales suggests that the drugs are being used not only for mental and physical conditions which require them, but also as a general palliative for a host of complaints. The American Psychiatric Association in a statement on June 16, 1956, hailed tranquilizing drugs as important aids in treatment of mental illness but voiced alarm at "the apparently widespread use of the drugs by the public for the relief of common anxiety, emotional upsets, nervousness and the routine tensions of everyday living.". Such casual use was said to be "medically unsound and . . . a public danger."

"Subtle pressures" were blamed for fostering public misunderstanding and misuse of the drugs. Doctors and patients alike naturally were eager to try a much-touted new medicine. Furthermore, competition between pharmaceutical companies and failure of news media to evaluate properly the early scientific reports tended to boost sales. Members of the A.P.A. accordingly were asked to be "circumspect in their announcements of early experimental results with the drugs." About the same time, Dr. Overholser said: "It seems fairly clear that these new drugs have been used in private practice in some instances indiscriminately, in improper dosages or for the wrong sort of indications."

[5] John T. Ferguson (Traverse City State Hospital, Michigan), paper delivered before American Psychiatric Association conference, Galesburg, Ill., Sept. 16, 1955.

[6] Tranquilizers account for $3 million of the Veterans Administration's annual drug expenditures of $17.5 million.

As research continued, more was heard of undesirable side-effects. Depending on individual circumstances, the side-effects have ranged over a wide gamut of human discomforts. Among those which have been clinically observed are confusion, loss of appetite, chilliness, depression, tremulousness, nasal congestion, diarrhea, constipation, skin outbreaks, jaundice, heart palpitations, impairment of motor coordination and of ability to learn. A few of these conditions can be extremely serious if a tranquilizing drug is taken without close medical supervision. The *Journal of the American Medical Association* published on Feb. 9, 1957, a report on the results of administering tranquilizers to 8,200 normal individuals; 400 experienced serious physical reactions and two became so depressed that they committed suicide.

Risks in Over-Tranquilizing; Advantages of Tension

Future research may show how to avoid dangerous side-effects, but what if the perfect tranquilizer should eventually be developed? Ethical and practical objections might be raised to dosing large numbers of people with drugs whose main effect is to soothe. Dr. Robert H. Felix, director of the National Institute of Mental Health, Dr. David B. Allman, president of the American Medical Association, and many other outstanding medical men have pointed out that tension and anxiety in moderation serve a useful purpose; they put steam under human aspiration.

A hospital psychiatrist who participated prominently in the early testing of tranquilizers has repeatedly urged that the drugs be used only to treat persons whose mental or emotional difficulties are of disabling severity. Referring to laboratory experimentation, he recently observed:

> The picture of the snarling, vicious, dangerous monkey transformed by a few milligrams of a chemical into a friendly "tranquil" and "happy" animal fascinates me in a horrendous way. Such a creature is a pleasure to have around in the laboratory, but he would not last ten minutes in his native jungle. Similarly, mankind is perfectly capable of tranquilizing itself into oblivion.[7]

The Academy of General Practice warned its members last May that tranquilized patients may become psychologically dependent on an emotional crutch.[8] The major

[7] Nathan S. Kline, foreword to Robert S. de Ropp, *Drugs and the Mind* (1957), p. ix.

[8] Public health studies indicate that the two tranquilizers most frequently prescribed, chlorpromazine and reserpine, are not truly addictive. However, users may become as psychologically habituated to taking them as to smoking cigarettes.

argument against general use of tranquilizers, however, is that it is never safe to take a drug, unless plainly necessary for medical reasons, before its effects on human beings have been thoroughly explored in a scientific manner.

Drug Therapy for Mentally Ill Persons

DRUG THERAPY in treatment of mental illness is not new. Various plants, brews, or salves have been administered to the insane for centuries. Some of the ancient folk remedies turned out to have scientifically demonstrable merit; among them was the so-called Indian snakeroot, from which a major modern tranquilizer (reserpine) is extracted. Writing a half-dozen years before the advent of tranquilizers, Albert Deutsch noted in his history of mental illness that "Nearly every drug has had its day in psychiatric practice." [9] Many drugs in addition to the tranquilizers serve importantly today in care of the mentally ill.

Protracted Search for Soothers and Stimulants

Medical scientists have long been on the lookout for better agents to induce two opposite effects on the mentally ill: to soothe the violent and to arouse the somnolent. Even where there is little or no prospect of cure, modification of the two extremes of behavior in the deranged serves not only a humanitarian purpose but also the needs of good institutional management.

Much of the hydrotherapy ("water cure") which for many years constituted a major form of treatment in mental hospitals consisted essentially of measures to quiet or stimulate patients. Dr. Benjamin Rush, an outstanding physician of the early days of the American republic, invented two mechanical devices, which he called the "gyrator" and the "tranquilizer," [10] to serve these purposes. Later, the sedatives and stimulants in common use today became valuable accessories in treatment of the mentally ill.

[9] Albert Deutsch, *The Mentally Ill in America* (Second edition, 1949), p. 497.

[10] Rush's "tranquilizer" was a chair in which a patient's hands, feet, and head could be held in firm positions. He considered it more humane than the "mad shirt," which was a heavy cloth tube encasing the patient to his knees and completely inhibiting bodily movement.

Drugs that act directly on the psychosis itself are harder to come by, particularly in the case of schizophrenia for which no specific cause has yet been found. Many "cures" for mental diseases have been adopted only to be discarded later as useless or harmful. Brutal methods of treatment employed a century ago were based on the belief that severe shock and fright had curative effects.

Employment of Drugs as an Aid to Psychotherapy

Drugs have been used in recent years as an adjunct to psychotherapy, the object being to put the patient in a sufficiently receptive frame of mind to benefit from the mind-healing ministrations of the practitioner. A number of drugs have been so employed, and many physicians think this is the primary advantage to be gained from tranquilizers.

The psychiatric world was stirred a quarter of a century ago when a remarkable remission of symptoms of schizophrenics was reported to have been obtained by injecting coma-producing amounts of insulin. The patients went into shock, emerged in a confused state, then somehow became more reasonable and more cooperative.

Insulin was the agent of the first of the shock treatments which raised hopes that an answer had been found to the puzzling problems of schizophrenia. Later experiments showed less promise, and dangers were found in use of insulin in mental cases. Other drugs were tried. Metrazol, a camphor-like substance producing epileptic convulsions, had a brief vogue in the 1930s. It was supplanted by electric shock therapy, which produced similar convulsions with less hazard.

Tranquilizers now are generally preferred over the shock treatments as a means of making patients amenable to psychotherapy. They are less drastic and are considerably simpler and safer to administer. Many patients have a terrible dread of shock treatments, which may need to be given almost daily for several months. Convulsions have resulted in broken bones, although drugs are now used to reduce the likelihood of such accidents in cases where shock treatment is employed.

Some hospitals have substantially cut down use of the older therapies, because their results with tranquilizers have been so favorable. The Veterans Administration now

has many fewer patients taking electric or insulin shock treatment than formerly,[11] while the number of V.A. patients on water therapy has decreased so sharply that many hospitals have converted their pack and tub rooms to dining or recreational areas.

The earlier methods, however, have not been abandoned altogether. V.A. hospitals have found that "a small group of patients do better with the older therapies or require them after careful investigation has shown they are refractory to the drugs."[12] Psychiatrists who gathered in Vienna last September to honor Dr. Manfred Sakel, originator of the insulin shock treatment for schizophrenia, said they thought it was still the best treatment for that affliction. Sakel told the group that insulin was more effective than other agents used therapeutically for this illness because it was a natural substance and merged with normal bodily processes.

The search for new and better shock agents continues. A University of Maryland scientist, John C. Krantz, Jr., reported on Nov. 5 that he had successfully tested a new synthetic shock agent (hexafluorodiethyl ether) which forms a vapor that the patient inhales and has a more gradual effect than other shock drugs. A paper delivered before the American Psychiatric Association last spring described administration of atropine to induce a coma, during which the patient re-enacted early emotional conflicts with therapeutic effect. Fifty per cent of the patients undergoing the treatment were said to have recovered sufficiently to return to society.[13]

PROPERTIES OF TRANQUILIZERS IN MOST COMMON USE

More than 30 different drugs in the tranquilizer group are on the market, and pharmaceutical houses are constantly testing new compounds in an effort to improve on existing types. The drugs most commonly used are chlorpromazine (best known trade name: Thorazine), reserpine (Serpasil) and meprobamate (Miltown or Equanil).[14]

[11] The number of patients on electro-shock therapy in V.A. hospitals fell from 4,527 in mid-1955 to 1,000 in the latter part of 1956; the number on insulin-coma shock declined from 1,486 to 383 and the number on neutral packs and tub therapy from 15,650 to 1,500.

[12] Ivan F. Bennett (chief of psychiatric research, Veterans Administration) in address before American Drug Manufacturers, Rye, N. Y., Oct. 9, 1957.

[13] Jacob J. Miller, Heinz H. Schwarz, and Gordon R. Torrer (Northville, Mich., Hospital), paper presented to American Psychiatric Association's annual meeting, Chicago, May 17, 1957.

[14] Chemically, chlorpromazine belongs to the group of phenothiazine derivatives and reserpine to the Rauwolfia alkaloids.

The tranquilizing powers of reserpine have been known for several thousand years in India, where the root of the plant, Rauwolfia Serpentina,[15] was prescribed by native doctors for numerous ailments, including insanity. The late Mahatma Gandhi is reported to have chewed the root as an aid to meditation. Indian scientists investigated the drug's properties long before it attracted the attention of western doctors.

Reserpine was first administered in the United States to a group of heart patients whose physician, Dr. Robert W. Wilkins (now president of the American Heart Association), had read about its beneficial effects on high blood pressure in a British medical journal article by an Indian doctor.[16] When Wilkins and his associates reported in 1952 on the drug's effectiveness in reducing hypertension; they observed also that patients using the drug seemed more relaxed, less anxious, happier.

This observation attracted the attention of psychiatrists. Reserpine was first used extensively on mental patients in this country by Dr. Nathan S. Kline at Rockland State Hospital, Orangeburg, N. Y. Kline found that about 90 per cent of his patients showed some improvement, and that 21 per cent of the most seriously disturbed benefited enough to go home.

Chlorpromazine came to the notice of psychiatrists at about the same time. This is no ancient medicine; on the contrary, it is entirely the product of modern drug technology. A synthetic compound developed by the Rhone-Pulenc Specia laboratories in France, it was about to be promoted as an anti-emetic when a Canadian report on its virtues with the mentally ill made the psychiatric claim on the drug paramount. Today chlorpromazine is the most widely used of all the tranquilizers; among V.A. patients on tranquilizers, nearly two-thirds take chlorpromazine, compared with one-fifth who take reserpine.

Meprobamate was developed in the laboratory as a muscle-relaxant, but it has the effect also of reducing tension, irritability, and restlessness. It is usually preferred for

[15] The plant received its name from a 16th century German physician, Leonhard Rauwolf, who collected medicinal plants in the East.—Robert S. de Ropp, *Drugs and the Mind* (1957), p. 208.

[16] Dr. Rustom Jal Vakil of Bombay, author of the article which appeared in the *British Heart Journal* in 1949, was one of six doctors from four countries who were recently given Albert Lasker Awards by the American Public Health Association for their part in introducing tranquilizing drugs.

normal patients who suffer mild complaints associated with the stress of modern living. It is prescribed less frequently for institutionalized psychotics. Only six per cent of the tranquilized group of V.A. patients are on meprobamate.

Other drugs show particular virtues in particular situations. Azacyclonol (or Frenquel) appears to be effective in banishing hallucinations, especially among alcoholics and the senile. The search for new and better tranquilizers, and for combinations of tranquilizers with other drugs, continues. Trilafon, a new phenothiazine derivative, has been found five to ten times as potent as chlorpromazine and is recommended for small-dosage medication of non-bedridden patients who suffer extreme anxiety. A research team for the Eli Lilly Co. reported to the American Chemical Society on Sept. 9 that tests of two new compounds on animals indicated that the substances were 20 times as powerful as tranquilizers now in use. The compounds—ethoxybutamoxane and chlorethoxybutamoxane—have not yet been given popular names.

Need for Drugs With Counter-Tranquilizing Effect

Not all of the major new drugs used in psychiatric practice are of the tranquilizer type. Patients in such severe depression that they lie mute and unmoving for hours are hardly subjects for further tranquilization. The constant hazard with tranquilizers—that they may throw a particular patient into suicidal depression—has stimulated interest in developing more drugs that have a counter-tranquilizing effect. A number of hospitals are experimenting with various combinations of tranquilizers and stimulants in the hope of striking a balanced medicament which will have maximum good and minimum bad effects.

Sufferers from melancholia in earlier days were given various "nerve tonics" containing iron, phosphate, and even a modicum of the poisons, strychnine and arsenic. The amphetamines—benzedrine and related drugs—have been tried on depressed patients to lift their spirits temporarily, but their side-effects—over-stimulation, sleeplessness, loss of appetite—make many doctors reluctant to use them.

A newer drug, Meratran, is found to elevate the mood of depressed patients without causing undesirable side-effects. On the other hand, this drug is likely to intensify anxiety if the patient is already in an acutely anxious state. Meratran commends itself chiefly for use by individuals

free of any psychotic disturbance who simply feel "low," uninterested in life, or abnormally drowsy. Another drug which promises to become a serviceable stimulant is methylphenidylacetate, sold under the trade name of Ritalin. The latter drug is expected to be particularly useful in counteracting the lethargy or depression sometimes caused by the use of tranquilizers. Patients have responded favorably to combined doses of Ritalin and a tranquilizer.

Relation of Physical to Mental Illness

ADVENT of tranquilizers has had anything but a soothing effect on the profession most concerned. At first, there was excitement over the prospect of acquiring a specific for schizophrenia. Then came a rush to try out the new drugs as they were issued by the pharmaceutical houses. Scientific papers, most of them detailing clinical observations of patients under drug therapy, began to pile up, with no one to separate the scientifically sound from the superficial or to synthesize the variegated results, which ranged from phenomenal success to utter failure.

Added to uncertainty over the value of the new drugs as therapeutic agents was their unsettling effect on psychiatrists who had emphasized psychotherapy as a major tool in treating serious mental illness. Attracted and at the same time disturbed by the possibility that a simple pill might take care of a hitherto stubborn and complex psychiatric case, the specialists began to reassess basic premises. Was schizophrenia primarily a manifestation of a physical disturbance? If so, could a therapy based chiefly on psychological approaches ever do more than palliate?

The subject of drugs in psychiatric practice began to dominate scientific parleys. The organizer of a major conference on drug therapy commented early this year that "Even at the professional level . . . the reports and meetings, the gossip and symposia and publications have become prodigious." A new word came into use—psychopharmacology—to cover the field in which interest centered.

The National Institute of Mental Health, provided with a $2 million appropriation for drug research, set up

a Psychopharmacology Service Center. N. I. M. H. Director Felix reported to a Senate Appropriations subcommittee on May 2, 1957, that the new unit was "already at work screening applications for research grants, reviewing the entire field of drug research in order to single out areas needing special attention, giving technical assistance and advice to scientists engaged in drug research, developing plans for intensive and extensive clinical tests of psychopharmacologic agents, and establishing a file of information covering past and on-going research and future drug research plans."

EXTENSION OF RESEARCH ON EFFECTS OF NEW DRUGS

As the psychiatrists met to discuss the threatened revolution in their practice, one thing became clear: the literature on the new drugs, while voluminous, scarcely established a scientific basis for their use. The *Annual Review of Medicine* reported in 1957 that "The largest number of psychiatric papers published during last year dealt with tranquilizing drugs . . . [but] unfortunately there is no clinical evidence of the first order to indicate just what these agents do." Dr. Felix told the Senate Appropriations subcommittee last spring that:

> The results of the many separate investigations of the tranquilizers . . . are not always in agreement. The reason for this may be that many of these studies . . . have been carried out in a great variety of situations, involving non-comparable patient populations, and using widely different experimental designs. Some experimenters report remarkable improvement in the condition of patients under tranquilizing drug therapy. . . . Others report that many of the psychotic symptoms are eased, but that the basic pathology remains unchanged.

A scientific paper presented before a research conference sponsored by the Veterans Administration last May noted that "Carefully controlled experimental studies supporting or contra-indicating specific uses of the drugs are few compared to the number of clinical impressions reported."

Steps have been taken to coordinate both the scientific literature and the research projects. The Psychopharmacology Service Center sponsored a conference of leading clinical investigators and scientific editors last January to consider how to handle "the great and expanding literature dealing with clinical evaluation of drugs."[17] The

[17] Jonathan O. Cole (chief of Psychopharmacology Service Center, N.I.M.H.), *Public Health Reports*, July 1957, p. 638.

Center is trying to see also that research grants in this field go where the findings will do the most good. In addition, the National Institute of Mental Health is cooperating with St. Elizabeth's Hospital in the District of Columbia on an extensive clinical inquiry into the influence of the various factors affecting mental illness. It is significant that the director of the latter project, Dr. Joel J. Elkes from Great Britain, is not a psychiatrist but a pharmacologist who has specialized in the chemistry of the nervous system.

The Veterans Administration early this year launched an intensive study of the effects of the newer drugs on 1,000 neuropsychiatric patients in its hospitals. Exhaustive data were collected over a three-month period for later analysis; one-half of the patients are being kept under close watch for an additional three-month period. All types of new drugs for mental illness, including tranquilizers, energizers, and anti-hallucinatory drugs, are being studied in the current project. One of the important things to be determined is whether certain drugs merely relieve anxiety or actually have an ameliorating effect on the basic psychosis.

Questioning of Drug Therapy Among Psychiatrists

More difficult to assess at this time than the therapeutic value of tranquilizing drugs is the eventual effect of developments in drug therapy on the practice of psychiatric medicine. The interest in drugs has given the biochemist a new prestige in psychiatric circles, while practitioners of psychotherapy and especially psychoanalysis have been put on the defensive.

Dr. Knight Aldrich of the University of Chicago has described some of the professional difficulties in the way of accepting drug therapy with an open mind:

> Often our vested interest in the dynamic approach causes us to condemn from the beginning chemical, physiological or psychological methods that cover rather than uncover conflicts. We tend to depreciate the new drugs as well as the older drugs and look with suspicion on any method that claims to do quickly that which we spend so much time in trying to do in a way which inevitably is slow and painful.[18]

A number of psychiatrists try to dampen enthusiasm for

[18] At regional research conference of American Psychiatric Association, Galesburg, Ill., Sept. 17, 1955.

following the drug-cure route at the expense of psychotherapy. They point out that many other chemical preparations were once acclaimed in the same way but later found useless or injurious.

> Psychiatrists too are human. . . . They too have tried (and discarded) a long succession of . . . "wonder drugs." . . . Do you remember the colloidal gold injections that wrecked any number of circulations? The administration of magnesium salts that blocked any number of kidneys? Or the gluteal sulphur-in-oil that . . . certainly prevented catatonics from sitting on their defenses?[19]

It has been recalled that administration of ordinary bromides to mental patients 30 years ago resulted in reports of as high a percentage of symptom remissions as is now claimed for the tranquilizers. Virtually any kind of new treatment, painful or not, appears to work near-miraculous benefits in the beginning. The enthusiasm of therapists for the new treatment and the tendency of patients to respond favorably to any new form of attention appear to have an influence apart from the treatment itself.

Notwithstanding the coolness of some psychiatrists to the drug approach to mental disease, it appears likely that drug therapy will gain in the years ahead. For one thing, the interest in tranquilizers has caused more psychiatric research money to flow to the biochemist. In his presidential address last May 13, Dr. Francis J. Braceland of the American Psychiatric Association stressed the growing alliance of psychiatry with physical medicine. "Of one point we may be certain," he said, "psychiatry will have to be more than ever a medical discipline."

Study of Possible Physical Causes of Mental Ills

A major advantage of tranquilizing drugs is that they provide important new tools for study of the causes and mechanisms of mental illness. According to the National Institute of Mental Health, "Evidence mounts that some biochemical fault or metabolic or physiological error is involved in predisposing people to or precipitating them into psychotic states." A drug of enormous importance in this line of investigation is LSD (lysergic acid diethylamide), which produces psychotic symptoms in normal persons. Individuals who take LSD remember and describe their feelings after the effects of the drug have worn off. This raises

[19] Dr. Jules Masserman (Professor of Psychiatry, Northwestern University) at A.P.A. regional conference, Galesburg, Ill., Sept. 17, 1955.

the question: If the symptoms of a psychosis can be induced by a chemical and dissipated by a chemical, then can it be a chemical factor produced spontaneously in the body which causes mental illness and which sometimes cures without application of any particular therapy?

Basic research is now being conducted in an effort to discover what physical processes actually take place as psychotic symptoms come on and recede, whether artificially induced or not. A number of studies in the biochemistry of mental illness, under way at the National Institute of Mental Health, are exploring the possibility that schizophrenia may be associated with a chemical malfunctioning in the brain or the nervous system.

The Veterans Administration reported early in November that researchers had found new evidence linking mental illnesses to disturbances in brain chemistry; studies had shown that an excess of a chemical which occurs naturally in the brain can block or distort transmission of messages along nerve circuits, while excess of another chemical speeds up nerve communication. Another V.A. study has shown abnormal cycles of hormone production in schizophrenics. Such inquiries make it possible to bring together the small pieces of knowledge that some day may place treatment of the mentally ill on a fully scientific basis.